

Appendix C

Correlated PM₁₀ Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds¹ and PM₁₀ concentrations at select monitoring sites within the Salton Sea Air Basin on October 30, 2016. Note a variety of instruments measure wind speed at different times during any given hour. Therefore, the following graphs reflect the hour of the wind measurement.

IMPERIAL COUNTY SITES (Figures C-1 to C-5)

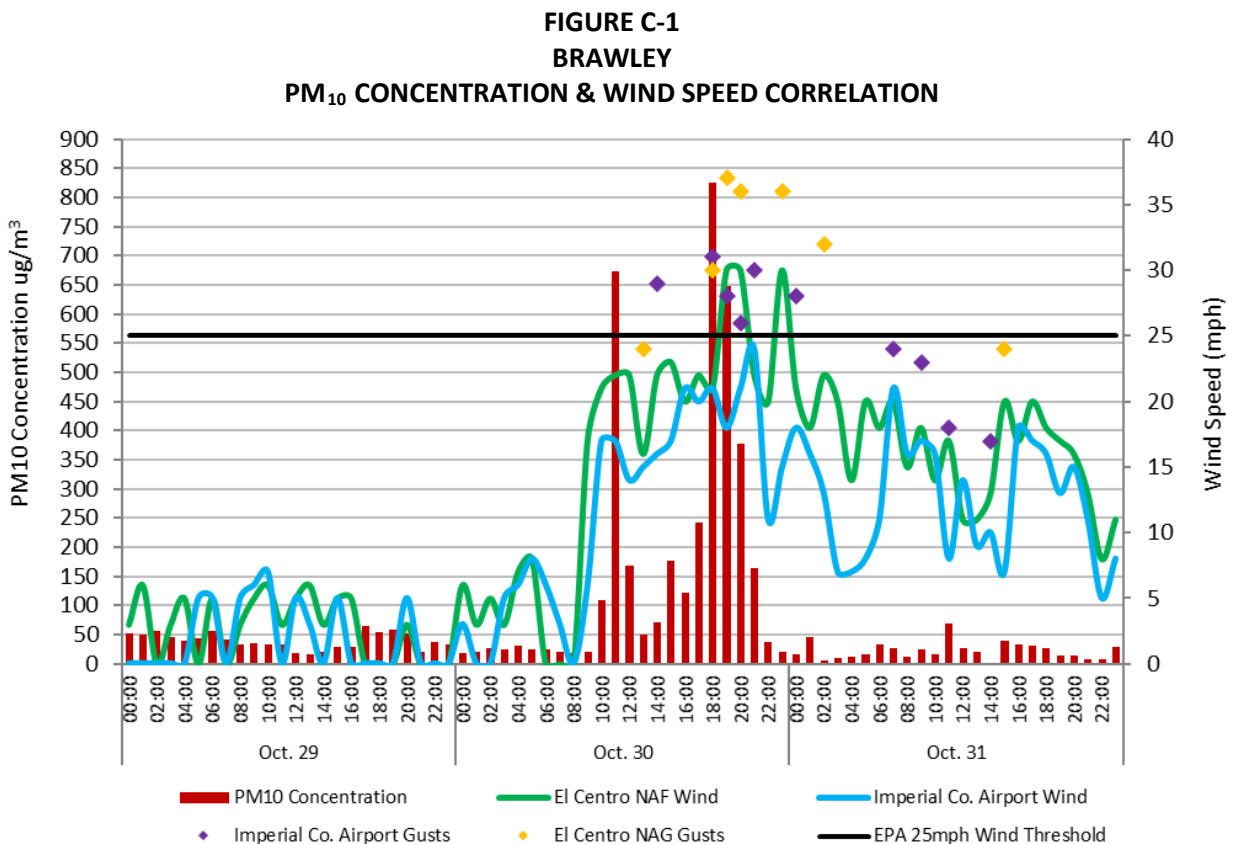


Fig. C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, particularly at El Centro NAF (KNJK). Brawley station does not measure wind. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system.

¹ National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); <https://w1.weather.gov/glossary/index.php?letter=w>

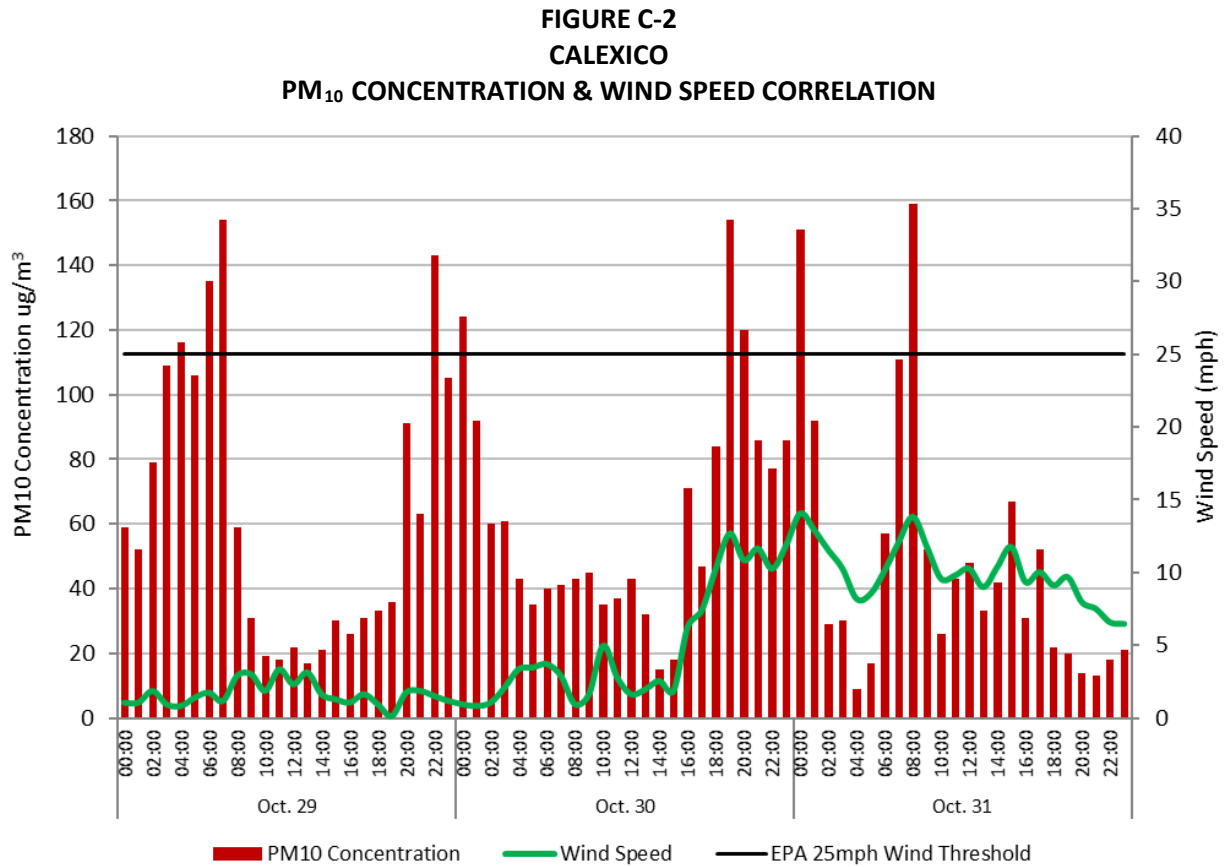


Fig. C-2: Winds at Calexico did not reach the 25 mph threshold, and due to wind direction as discussed earlier, did not receive the amount of dust that stations farther north received. Air quality and wind data from the EPA's AQS data bank.

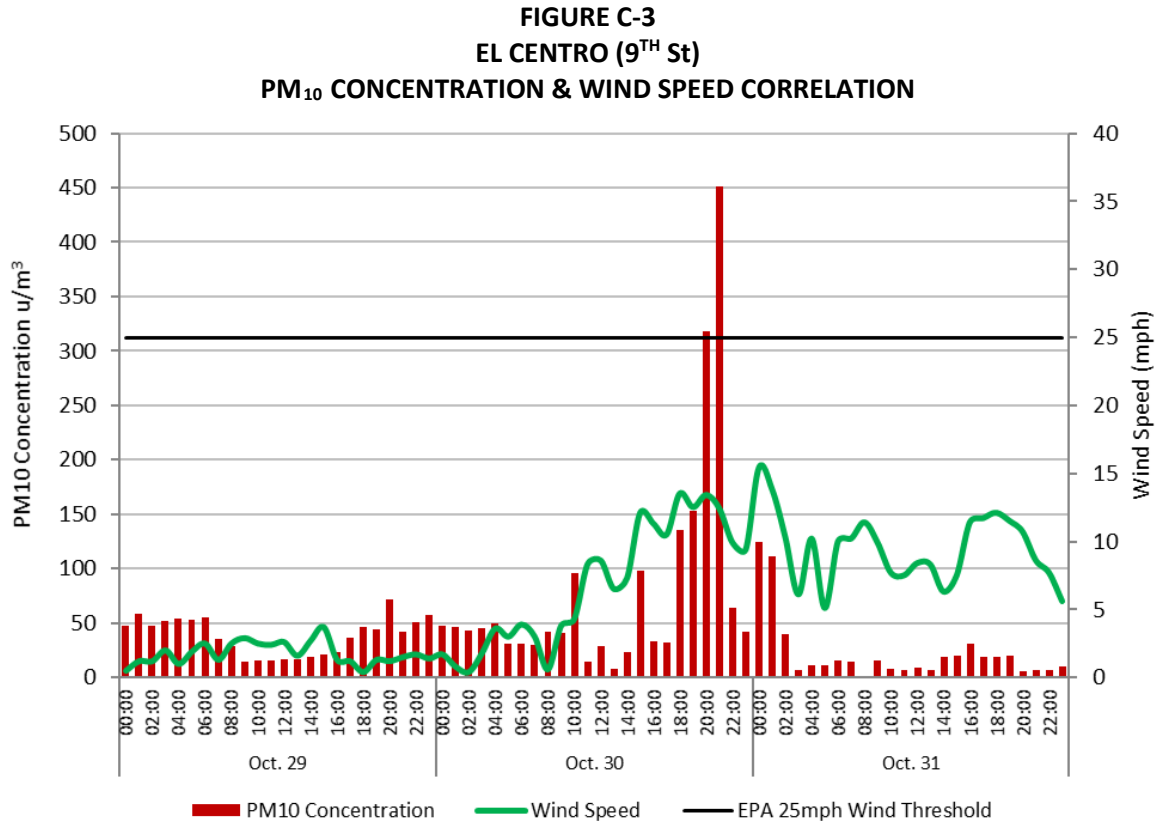


Fig. C-3: Winds at El Centro did not reach the 25 mph threshold, and due to wind direction as discussed earlier, did not receive the amount of dust that stations farther north received. Air quality and wind data from the EPA's AQS data bank.

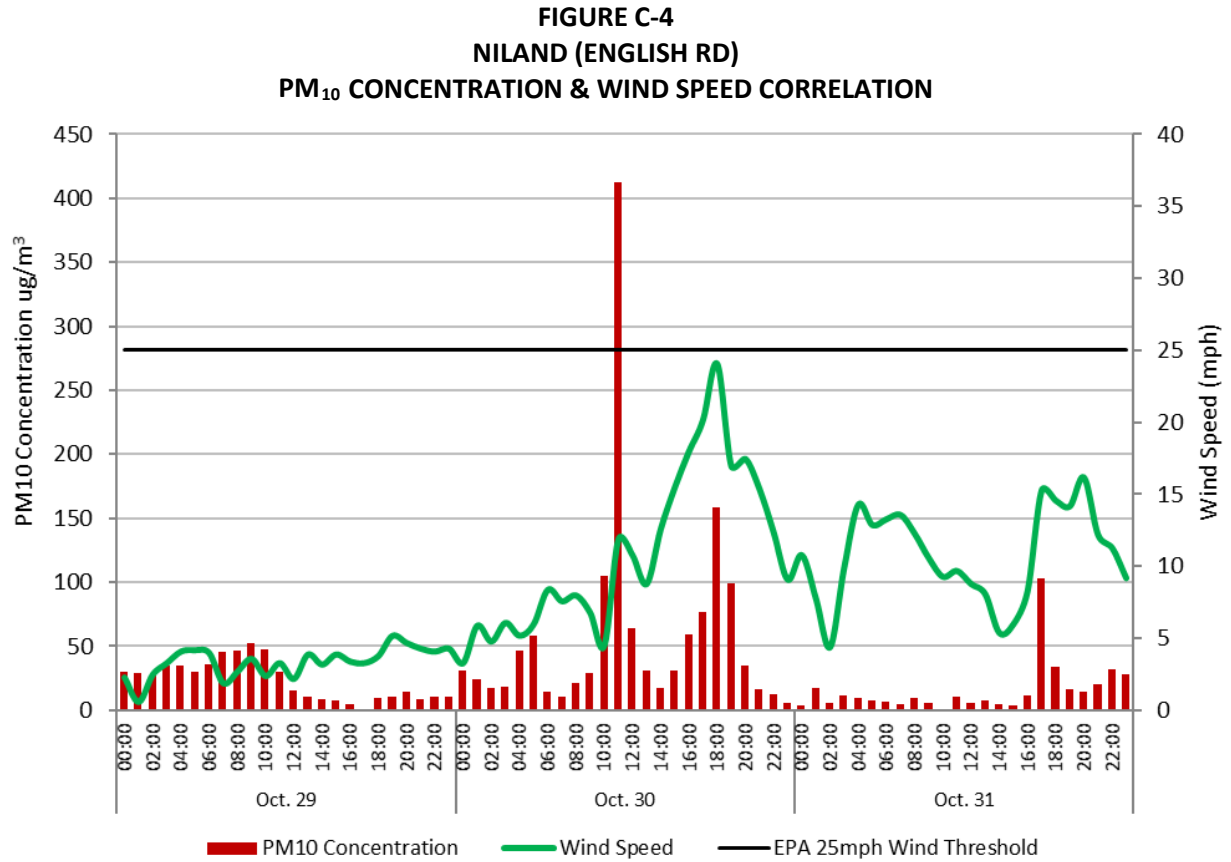


Fig. C-4: Winds at Niland (English Rd) did not reach the 25 mph threshold although the monitor still saw a rise in concentrations on October 30, 2016. However, since winds were primarily focused on the stations in the middle part of the county, Niland did not exceed. Air quality and wind data from the EPA's AQS data bank.

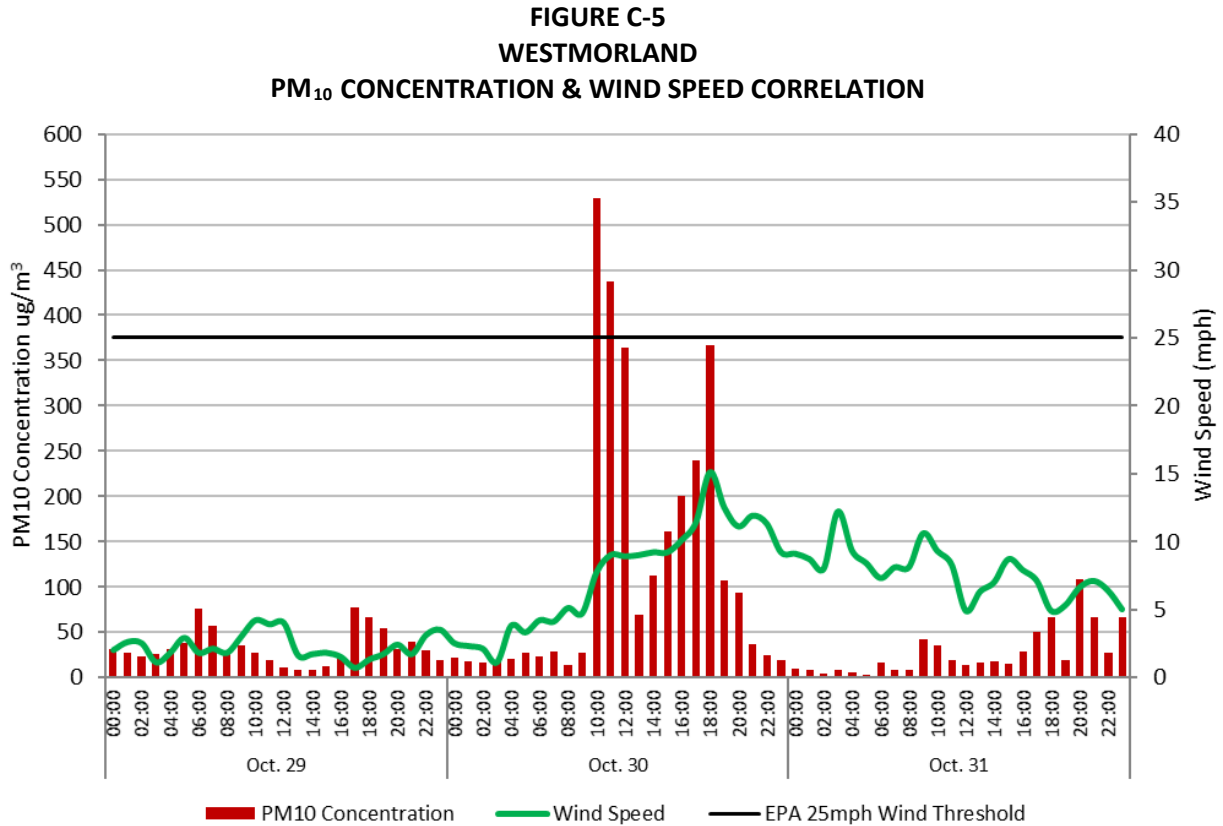


Fig. C-5: Although winds did not surpass 25 mph at Westmorland station, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. The station ended the day just under an exceedance. Air quality and wind data from the EPA's AQS data bank.

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ DESERT CAHUILLA INDIANS RESERVATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

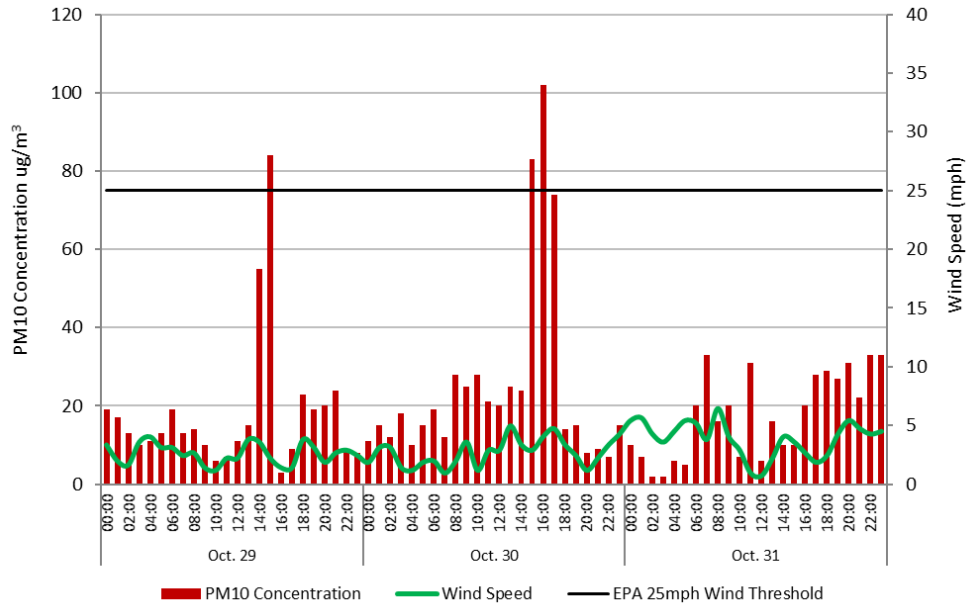
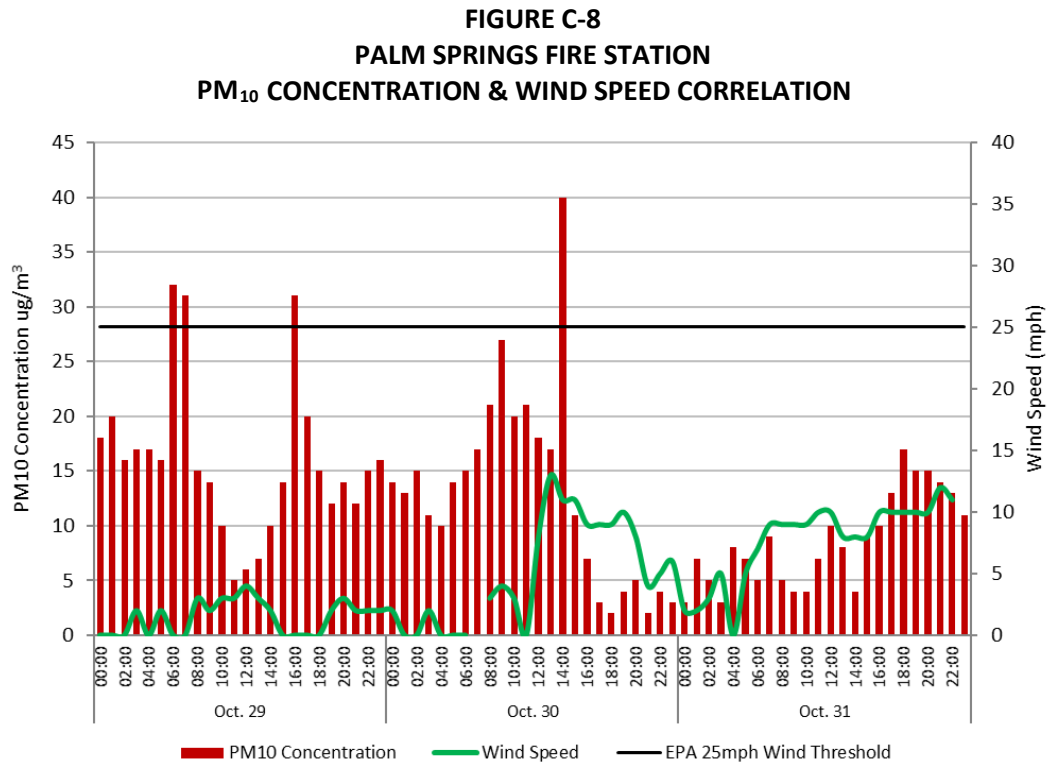


Fig. C-6: Concentrations rose in response to higher winds on October 30, 2016. Air quality and wind data from the EPA's AQS data bank.

FIGURE C-7
INDIO (JACKSON ST)
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

Fig. C-7: Indio (Jackson St) did not record during this period.

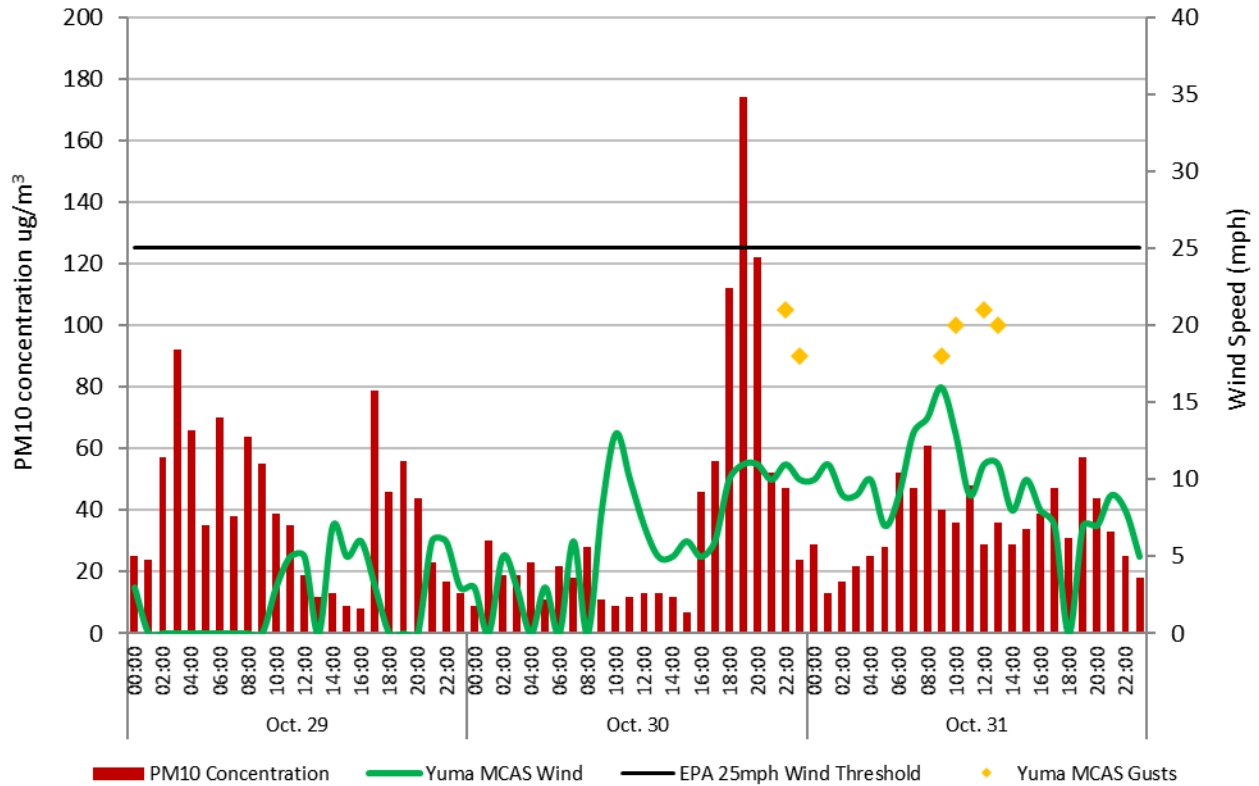


Figs C-8: Concentrations rose in response to higher winds on October 30, 2016. Air quality and wind data from the EPA's AQS data bank.

SOUTHWESTERN ARIZONA

FIGURE C-9

YUMA, ARIZONA SUPERSITE

PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

Figs C-9: Yuma Supersite in Yuma, Arizona, located downstream in the southwestern portion of Arizona, saw increased PM₁₀ concentrations in response to higher winds. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system.